

Indiana Department of Education
STEM Council Meeting
September 6, 2018



AGENDA

2:30 - 4:00 pm

Topic

Time

- | | | |
|----|---|-----------|
| 1. | Welcome & Quick Updates | 2:30-2:35 |
| 2. | Final Draft of Indiana STEM 6-Yr Strategic Plan | 2:35-3:05 |
| 3. | Discussion Items | 3:05-3:40 |
| 4. | Next Steps | 3:40-4:00 |



Updates:

- RFP for STEM Research & Evaluation Posted
 - Austin Jones, IDOA, AuJones@idoa.IN.gov
- November 9, 2018 - Launch Event



***Developed By the
Indiana Department of Education
in Collaboration with the
Indiana STEM Council***



2019-2025



Our Vision

All Indiana students in grades K-12 will graduate with critical thinking skills and be prepared for an innovation-driven economy by accessing quality, world class STEM education every day in the classroom by 2025.





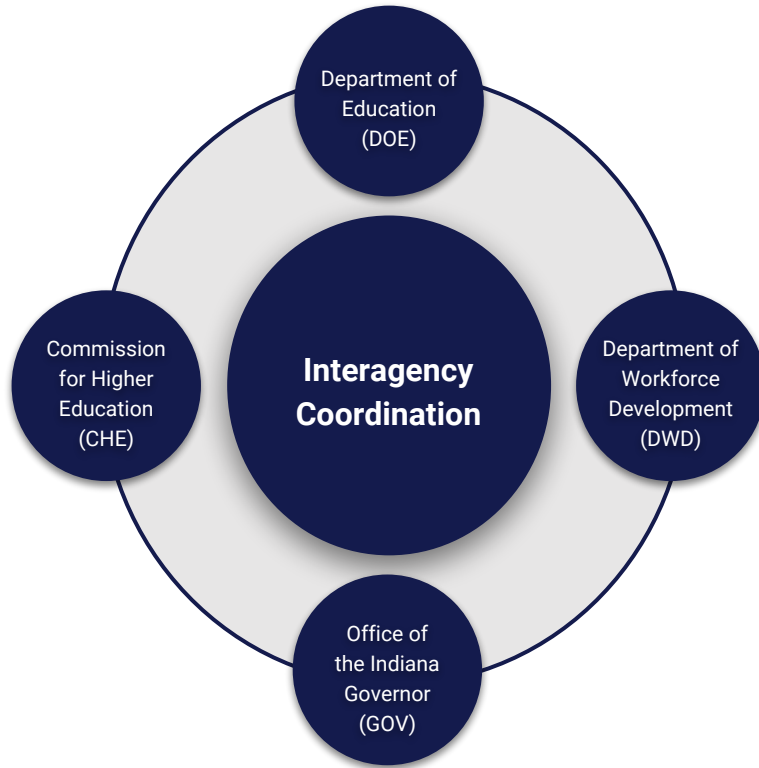
Our Mission

Ensure Indiana teachers are prepared to provide every student in grades K-12 with an evidence-based, effective STEM education by 2025





Indiana Department of Education STEM Council Members



Members Included Representatives From:

Indiana Educators of STEM Areas
Indiana Department of Education
Office of the Indiana Governor
Indiana Department of Workforce Development
Indiana Commission for Higher Education
Indiana State Board of Education
Indiana House of Representatives
Indiana Senate
Indiana Economic Development Corporation
Indiana State Teachers Association
Indiana Chamber of Commerce
American Federation of Teachers
Center Indiana Corporate Partnership
Rolls Royce
Eli Lilly and Company
OrthoWorx
Mead Johnson Nutrition
Duke Energy
Cummins
Ivy Tech Community College
Purdue University





Federal and National STEM Consultation



Partners Referenced During the Development of Indiana's STEM Plan:

The White House, Office of Science and Technology Policy
Iowa Governor's STEM Advisory Council
Tennessee Department of Education
Massachusetts Department of Elementary and Secondary Education
100Kin10
STEM Ecosystems Initiative
U.S. News and World Report STEM Solutions
Code.org
American Institute for Research
National Science Foundation
Microsoft
Salesforce
ZipRecruiter
CSForAll
Project Lead the Way
CISCO
Jobs for the Future
Smithsonian Science Education Center





Indiana Department of Education STEM Plan



Vision: All Indiana students in grades K-12 will graduate with critical thinking skills and be prepared for an innovation-driven economy by accessing quality, world class STEM education every day in the classroom by 2025.

Mission: Ensure Indiana teachers are prepared to provide every student in grades K-12 with an evidence-based, effective STEM education by 2025.

Strategic Objectives

Improve STEM Instruction

100% of IN K-12 teachers will be trained in problem-based and inquiry-based approaches to learning by 2025.

Actions

- Embed critical thinking, problem-based and inquiry-based approaches to learning within all Indiana pre-service prep programs and in-service educator professional development.
- Provide school districts access to high quality STEM professional development opportunities.
- Develop STEM cadre to foster collaboration and share best practices among educators across the State.

Outcomes

- Educators entering the profession will be proficient in critical thinking, problem-based and inquiry-based approaches to learning and instructional practices.
- All K-12 Indiana in-service teachers will be trained by highly qualified, vetted STEM professional development providers.
- Indiana will close the STEM teacher gap.
- Increase the number of summer STEM-related externships for educators in partnership with local business and industry.

Scale Evidence-based STEM Curriculum in Classrooms

100% of IN schools will implement integrated, evidence-based STEM curriculum by 2025.

- Research and publish a vetted list of high quality STEM curriculum providers to educators.
- Collect and publicize data regarding STEM curriculum utilized within Indiana K-12 environments.

- Increase the number of schools utilizing evidence-based, vetted STEM curriculum.
- Increase the number of IDOE STEM certified schools.

Foster Early STEM Career Exposure

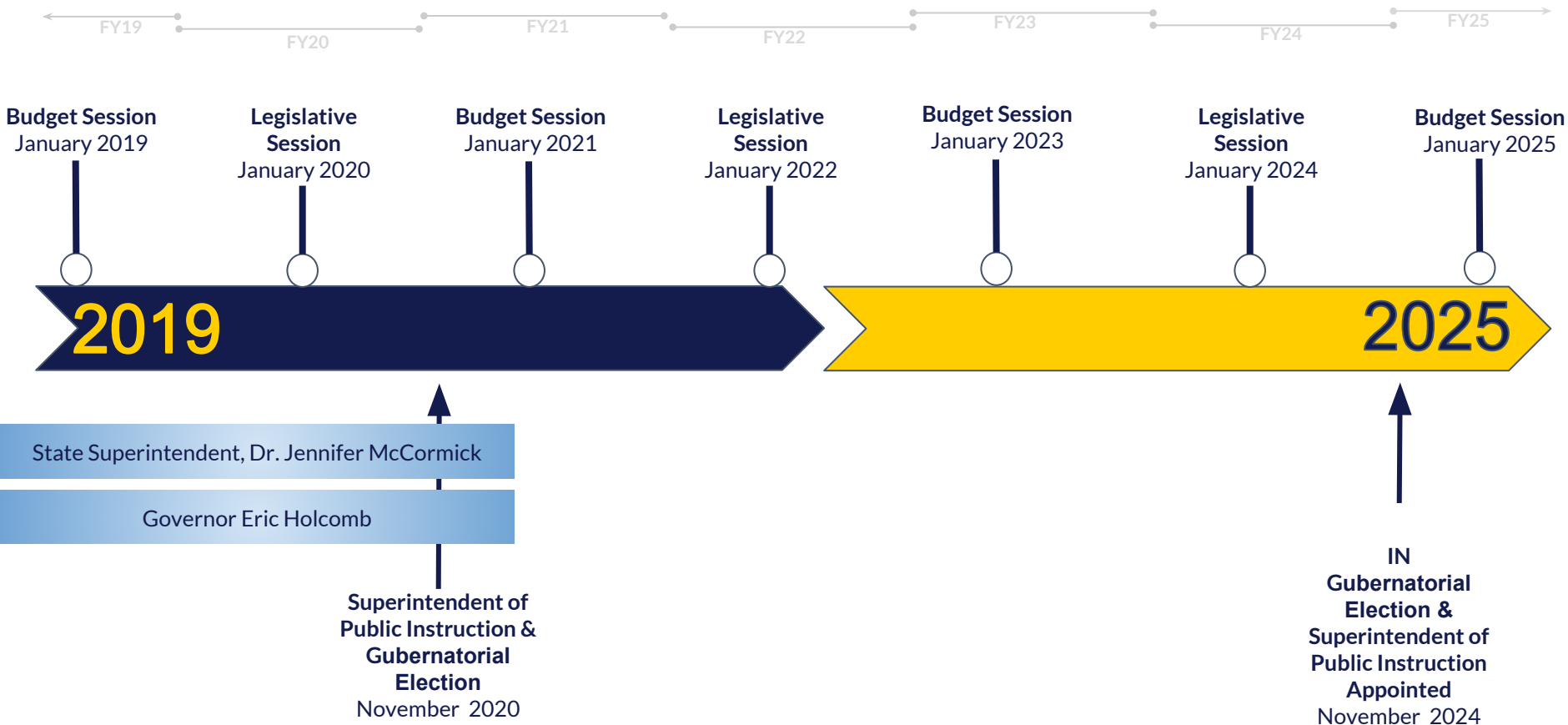
100% of IN schools will create and sustain robust STEM related business and industry partnerships in order to inform curriculum, instruction, and student experiences to foster college and career readiness.

- Develop a comprehensive playbook outlining best practices in STEM integration and partnerships.
- Crosswalk STEM-related experiences and courses to graduation pathway requirements.
- Enhance existing and develop new partnerships with business, industry and post-secondary to create appropriate STEM graduation pathways.
- Expand STEM related work based learning (WBL) experiences.
- Collaborate with organizations to promote STEM experiences outside of the classroom.

- Increase in number of STEM related Locally Created Pathways.
- Increase in school understanding of STEM related experiences linked to graduation pathways.
- Increase in overall understanding of STEM integration.
- Increase in STEM related WBL experiences.
- Increase collaboration among local and regional cross sector teams (education, business, and civic) to scale and streamline student access to high-wage, high-demand STEM careers and experiences.



Timeline Influences



Discussion Items:

- FY18 & FY19 Budget Update
- FY20 & FY21 Budget Request
- STEM Con 2019





FY18 & FY19 Budget Update



- FY19 New line items
 - Robotics Expansion Project
 - Support Services
 - Round 2 Acceleration Grants

PROGRAM	ALLOCATION	EXPENDED	DESCRIPTION	IMPACT		
				DISTRICTS/ SCHOOLS	STUDENTS	TEACHERS
FY2018						
BSU Summer Institute - Summer 2017 & 2018 (Attachment A)	Up to \$90,000	\$31,787.90 (2017) <u>\$54,203.02 (2018)</u> \$85,990.92	Required in IC	Approx. 20	NA	140
Round One: STEM Acceleration Grants (Attachment B)	\$910,000	\$953,249	Provided funding to school districts to implement evidence based STEM curriculum & associated PD	11/60	32,891	NA
FY18 Total	\$1,000,000	\$1,039,239.92				
FY2019						
BSU Summer Institute - Summer 2019 (Attachment A)	Up to \$90,000	TBD	Required in IC	Approx. 20	NA	70
Round Two: STEM Acceleration Grants	\$500,000	TBD	Provide funding to school districts to implement evidence based STEM curriculum & associated PD	TBD	TBD	TBD
Robotics Exposure Expansion Project - TechPoint Foundation	\$50,000	TBD	Provide funding to expand MS & HS robotics programming across the State.			
Support Services/Staffing	\$200,000	TBD	STEM Support Staff	NA	NA	NA
STEM Program Alignment - Research & Evaluation	\$250,000	TBD	Evaluation of STEM Certified Schools Indiana STEM Landscape Research Report	ALL	ALL	ALL
FY19 Total	\$1,000,000					





FY20 & FY21 Budget Request



- \$20,000,000 Total Requested
 - STEM Externships, PD & Support
 - Cohort 3 & 4 Acceleration Grants
 - Out of School Time Expansion
 - Research & Evaluation
 - Administrative Costs

DRAFT PROPOSED BUDGET for FISCAL YEAR 2020

PROGRAM	ALLOCATION	DESCRIPTION
STEM Externships, Professional Development & Support	\$6,000,000	<ul style="list-style-type: none">● Provide grant funding to school districts and higher learning institutions to use for pre-service & in-service educator professional development in problem/project/ inquiry-based approaches to learning<ul style="list-style-type: none">● <i>Strategic Objective 1</i>● Educator STEM industry externships with a focus on the top 3 in demand STEM careers in Indiana<ul style="list-style-type: none">● <i>Strategic Objective 3</i>● Facilitate a Statewide STEM conference<ul style="list-style-type: none">● <i>Strategic Objective 1, 2, & 3</i>● Develop digital IN-STEM Coalition Website<ul style="list-style-type: none">● <i>Strategic Objective 1, 2, & 3</i>
Round Three: STEM Acceleration Grants	\$1,000,000	<ul style="list-style-type: none">● Provide grant funding to school districts to implement vetted & evidence based STEM curriculum<ul style="list-style-type: none">● <i>Strategic Objectives 1 & 2</i>
Out of School Time STEM Alignment and Expansion Program	\$1,000,000	<ul style="list-style-type: none">● Provide grant funding to out of school time programs to implement vetted & evidence based STEM curriculum aligned to local school based offerings<ul style="list-style-type: none">● <i>Strategic Objective 2</i>
Next Level Computer Science Grant Program	\$1,750,000	<ul style="list-style-type: none">● Provide grant funding to eligible entities to implement teacher professional development programs for training in teaching computer science.● Provide grant funding to school districts to implement vetted & evidence based computer science curriculum.<ul style="list-style-type: none">● <i>Strategic Objectives 1 & 2</i>
STEM Program Alignment - Research & Evaluation	\$300,000	<ul style="list-style-type: none">● Evaluation of all funded programs under this funding source, including but not limited to:<ul style="list-style-type: none">● Evaluation of Round 1 (SY18-19) STEM Acceleration Grantees● Evaluation of STEM Certified Schools (Attachment C)<ul style="list-style-type: none">■ <i>Strategic Objective 1, 2, & 3</i>
Program Total	\$9,500,000	
IDOE Administrative Costs	\$500,000	
Grand Total	\$10,000,000	





FY20 & FY21 Budget Request



- \$20,000,000 Total Requested
 - STEM Externships, PD & Support
 - Cohort 3 & 4 Acceleration Grants
 - Out of School Time Expansion
 - Research & Evaluation
 - Administrative Costs

DRAFT PROPOSED BUDGET for FISCAL YEAR 2021

PROGRAM	ALLOCATION	DESCRIPTION
STEM Externships, Professional Development & Support	\$6,000,000	<ul style="list-style-type: none">• Provide grant funding to school districts and higher learning institutions to use for pre-service & in-service educator professional development in problem/project/ inquiry-based approaches to learning<ul style="list-style-type: none">• <i>Strategic Objective 1</i>• Educator STEM industry externships with a focus on the top 3 in demand STEM careers in Indiana<ul style="list-style-type: none">• <i>Strategic Objective 3</i>• Facilitate a Statewide STEM conference<ul style="list-style-type: none">• <i>Strategic Objective 1, 2, & 3</i>• Develop digital IN-STEM Coalition Website<ul style="list-style-type: none">• <i>Strategic Objective 1, 2, & 3</i>
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STEM Program Alignment - Research & Evaluation	\$300,000	<ul style="list-style-type: none">• Evaluation of all funded programs under this funding source, including but not limited to:<ul style="list-style-type: none">• Evaluation of Round 2 (SY19-20) STEM Acceleration Grantees• Evaluation of STEM Certified Schools (Attachment C)<ul style="list-style-type: none">■ <i>Strategic Objective 1, 2, & 3</i>
Program Total	\$9,500,000	
IDOE Administrative Costs	\$500,000	
Grand Total	\$10,000,000	



Next Steps:

- Timeline for Rollout
- STEM Council Engagement Moving Forward

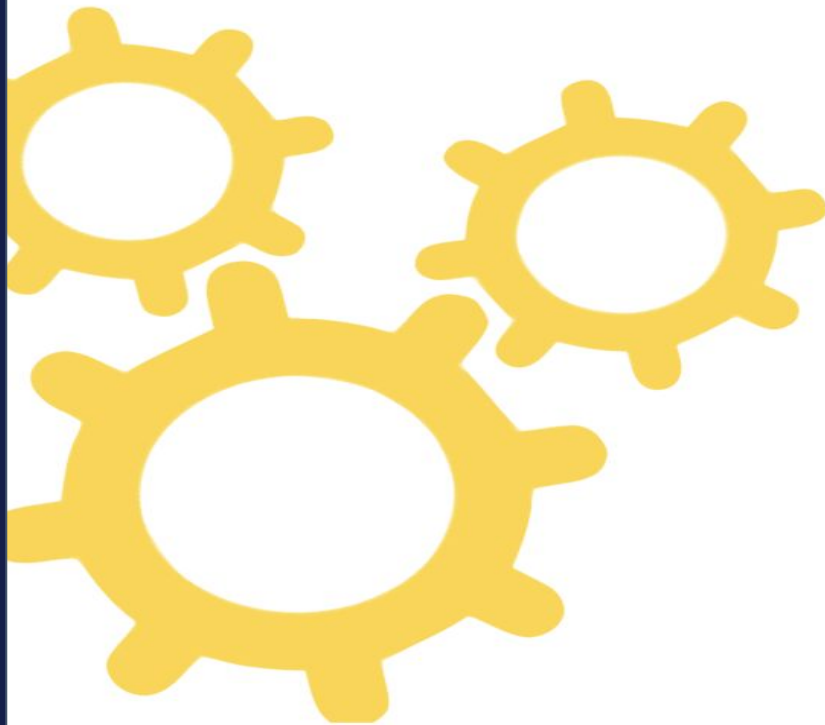




Timeline for Rollout



- STEM Celebration
 - November 9, 2018
 - 10-11:30 am
 - Statehouse Atrium
 - Invitation forthcoming

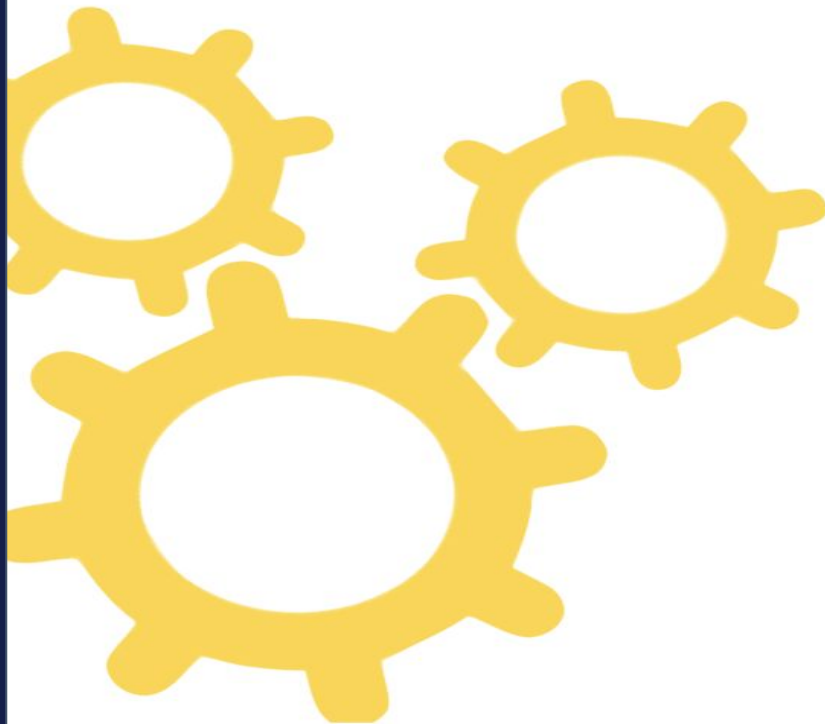




STEM Council Engagement



- Support into 2019 session
- Statewide STEM Conference
Involvement & Support





Statewide STEM Conference



- **Indiana STEM Education Conference and Summer STEM Connection Summit**
 - Part One - Indiana STEM Education Conference
 - January 10 @ PU - PU will invite schools and researchers to present their STEM best practices and research.
 - Part Two - The Summer STEM Connection Summit
 - Tentative : June 12-14, 2019
 - Focus on district and building level leadership, teachers, business/industry partnerships, implementing the STEM Plan, CS and STEM workshops, vetted curriculum,
 - Discount for those attending both the conference and the summit.

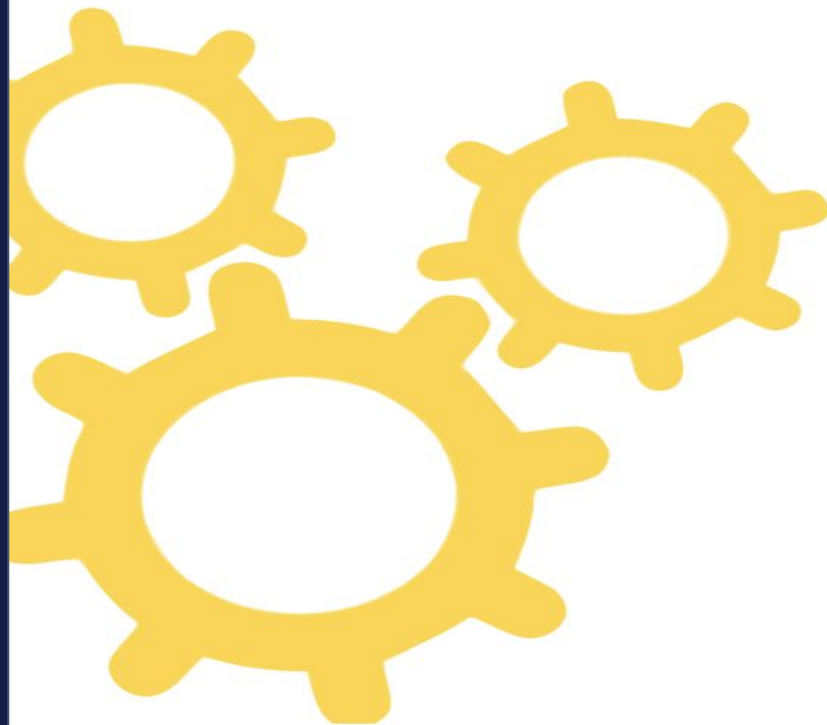




STEM Council Engagement



- Support into 2019 session
- Statewide STEM Conference Involvement & Support
- Launch Event Participation & Support
- Biannual Meetings
 - Feedback Survey



**Working Together for Student
Success!**

